

Figure 1 consists of 16 subplots arranged in a 4x4 grid. The rows are labeled (a), (b), (c), and (d) on the left, corresponding to initial conditions where all particles are in state 1, 2, 3, and 4 respectively. The columns are labeled (1), (2), (3), and (4) at the bottom, corresponding to values of  $\alpha = 0.5, 0.7, 0.9, 0.99$  respectively. Each subplot shows the number of particles (y-axis, 0 to 100) versus time (x-axis, 0 to 100). The plots show that as  $\alpha$  increases, the system converges to a steady state more quickly and the number of particles in state 1 decreases.

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